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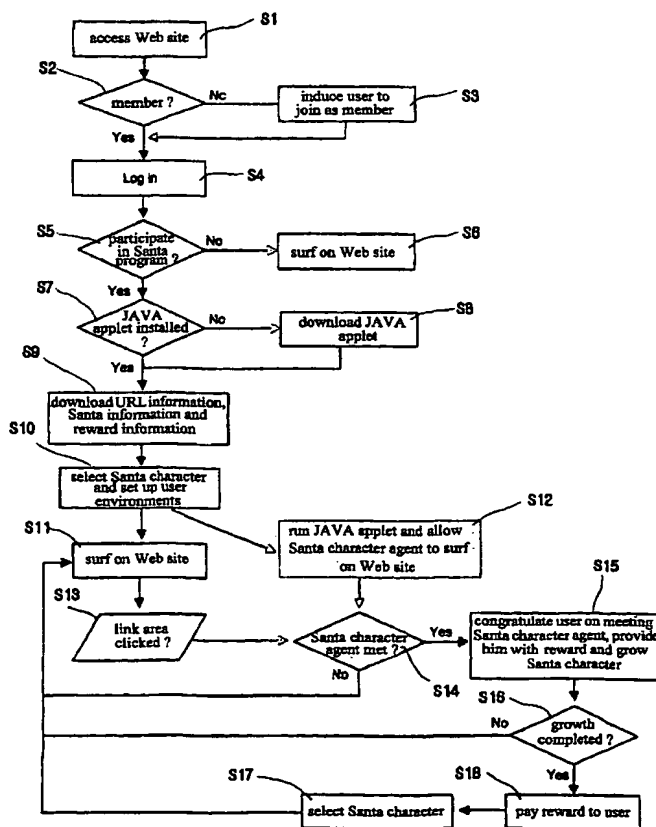
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ning of each regular issue of the PCT Gazette.

(54) Title: SANTA CHARACTER AGENT EMBODIED ON WEB ON THE BASIS OF JAVA/XML TECHNOLOGY



(57) Abstract: This invention relates to Santa character agent embodied on web on the basis of JAVA/XML, which induces customers to visit at the site of enterprise and provides customers with a various reward in order that once visited customers use continually the site of enterprise. This is a reward technology, which cultivates excellent customer, and makes customer assets more valuable. To obtain this technology, character growth technology, character creating technology and reward agent technology (processor that performs a certain fluctuating data in the remote site of dispersed database) on web is used on the basis of JAVA/XML technology. To give rise to interest, according to growth condition (number to visit a page, time to view a page, number to click advertisement, purchasing amount) various characters are rewarded through a "HAPPEN TO MEET" event. Therefore, this invention has superior effect due to a method to confer more scientific and measurable reward to internet business professional enterprise, maintenance of customer assets of enterprise, cultivation of excellent customer, and activation of internet business market.

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SANTA CHARACTER AGENT EMBODIED ON WEB ON THE BASIS OF JAVA/XML TECHNOLOGY

TECHNICAL FIELD

The present invention relates in general to a Santa character agent
5 embodied on the Web on the basis of a JAVA/XML technology, and more
particularly to a method for, on the basis of the JAVA/XML technology, embodying
a reward agent on a Web server, creating and growing a character and simulating the
growth of the character. Herein, "XML (eXtensible Markup Language)" is an
extension language of HTML (HyperText Markup Language). The XML improves
10 a homepage construction function and facilitates the process of complex data in a
client system essential to Internet business. Further, the XML is configured to
draw up a display of data stored in a location of a memory addressed by an address
from an Internet user or a specific register and make it easy for the Internet user to
manage and access the stored data. The "reward agent" signifies a processor for
15 processing data fluctuations in a site located remotely from a distributed database.

BACKGROUND ART

Conventionally, a reward technology can be implemented using HTML
1.0 (this is a language used to draw up a Web page for expression of information in
WWW) so far as it is supported by a homepage creation technique. This reward
20 technology is adapted to give a reward to an Internet user for viewing an
advertisement or for finding a hidden treasure. However, such a conventional
reward technology has no means capable of retrieving user information.

Further, because the conventional reward technology has no HTML-based
algorithm between a customer's action and a reward, it is nothing but a simple

conception, rather than a banner advertisement technique.

Moreover, the conventional reward technology encounters a problem in terms of membership management in that it cannot manage information data about Web pages visited by users.

5 DISCLOSURE OF THE INVENTION

Therefore, the present invention has been made in view of the above problems, and it is an object of the present invention to provide a method for embodying a Santa character agent on the Web on the basis of a JAVA/XML technology, in which a Santa character is grown on the Web according to a defined
10 rule and the Santa character agent automatically travels from one Web page to another without being subjected to any program operation or data input, in order to provide rewards to users, manage a large amount of information accumulated by members while roaming over several Web pages and analyze the managed information to determine which information is appropriate to each of the members.

15 In a feature of the present invention, an Internet user receives information such as a uniform resource locator (URL) file, Santa information and a reward from a Web server using a JAVA applet and, on the basis of the received information, selects a Santa character and sets up user environments. Herein, the "URL" is an address used to designate the location of an Internet Web site, a Web page or
20 information such as a picture contained in the Web page. As one example, the URL may be "http://www.km21.net", wherein the header "http" is not the URL itself but a communication protocol used to transfer a resource designated by the URL over a communication network. Consequently, the "http://www.km21.net" is a URL of one Web page. The Internet user meets a Santa character agent upon
25 clicking on a link area on a Web site while running the JAVA applet and surfing on the Web site. Then, the Santa character agent congratulates the Internet user on

meeting it, provides him with a reward and pays him the reward after the growth of a Santa character. Therefore, the Santa character agent can be embodied on the Web on the basis of a JAVA/XML technology including a reward agent technology and a character creation technology.

5 BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a view illustrating a basic concept of a method for embodying a
10 Santa character agent on the Web on the basis of a JAVA/XML technology in accordance with the present invention;

Fig. 2 is a view illustrating a configuration and function of the Santa character agent embodied on the Web on the basis of the JAVA/XML technology in accordance with the present invention; and

15 Fig. 3 is a flowchart illustrating the method for embodying the Santa character agent on the Web on the basis of the JAVA/XML technology in accordance with the present invention.

BEST MODE FOR CARRYING OUT THE INVENTION

Fig. 1 is a view illustrating a basic concept of a method for embodying a
20 Santa character agent on the Web on the basis of a JAVA/XML technology in accordance with the present invention. As shown in this drawing, an Internet user can select a desired Santa character while surfing on several Web pages through a log-in operation. The Santa character agent automatically travels from one Web page to another without being subjected to any program operation or data input.

When an event "HAPPEN TO MEET" occurs while freely roaming over several Web pages, the Santa character agent provides a reward to the user according to a defined rule. Then, the Santa character selected by the user is grown on the Web according to a preset program.

5 Fig. 2 is a view illustrating a configuration and function of the Santa character agent embodied on the Web on the basis of the JAVA/XML technology in accordance with the present invention. As shown in this drawing, the Santa character agent is classified into a Santa character creating phase, Santa character functioning phase and Santa character growing phase. Santa characters are nine in
10 type and a growing model thereof is subdivided into six steps. For example, as indicated by the reference numeral 1 in Fig. 2, a Santa character may have a goblin shape and be grown in the order of a tiny goblin, young goblin and old goblin while being subjected to variations in size and shape. The Santa character agent is adapted to perform five types of application operations 2. For example, upon
15 meeting an Internet user, the Santa character agent may send a congratulatory message to the user while dancing or while waving a flag and greeting the user.

 The Santa character agent is further adapted to perform an animation operation 3 which is a technology for varying the shape of an image with time to display the image as if it moves. The animation operation 3 is composed of five
20 frames and three color elements, red, blue and yellow, expressing the color of a Santa character. A selected Santa character is grown according to growth conditions such as the number of times that the Internet user visits a given Web page, a period of time for which the user views the Web page, the number of times that the user clicks on a given advertisement and a purchasing amount of the user.
25 When an event "HAPPEN TO MEET" occurs, the Santa character agent provides a reward to the user while performing application operations such as sudden appearance, greeting, movement, gift offering and dancing. The reward is provided to the user at each growth step. For example, assume that the amount of cyber

money required up to the fifth step is one million won and the reward to the user is one thousand won when meeting the red element, ten thousand won when meeting the blue element and one hundred thousand won when meeting the yellow element, respectively. The step-unit reward is provided to the user whenever meeting the
5 red, blue or yellow element at each step. In this manner, the reward is provided to the user when a selected Santa character is completed in growth and whenever the character appears.

Fig. 3 is a flowchart illustrating the method for embodying the Santa character agent on the Web on the basis of the JAVA/XML technology in
10 accordance with the present invention.

First, if an Internet user accesses a Web site of the present invention at step S1, then a Web server managing the Web site determines at step S2 whether the user was registered as a member. If the user was not registered as the member, then the Web server induces the user to join as the member at step S3.

15 In the case where the user was registered as the member, he will log in at step S4. If the user logs in, then the Web server determines at step S5 whether the user will participate in a Santa program. If the user does not wish to participate in the Santa program, he will surf on the Web site at step S6. However, in the case where the user wishes to participate in the Santa program, the Web server
20 determines at step S7 whether a JAVA applet has been installed in a user's computer. Unless the JAVA applet has been installed in the user's computer, the Web server sends the JAVA applet thereto at step S8. If the JAVA applet has been installed in the user's computer, it automatically runs or sleeps upon being connected to the Web site. Further, in the case where the JAVA applet installed in
25 the user's computer is different in version from that provided from the Web server, an associated menu is automatically configured and displayed on a Web page.

Thereafter, the user downloads URL information, Santa information and reward information from the Web server using his computer at step S9. The URL

information is managed in the form of a file by the Web server. In the case where the URL file from the Web server is different from that in the user's computer, it is downloaded and automatically installed in that computer. Further, the URL information from the Web server is managed under the condition that it is classified into a general advertisement. Different rewards are provided at respective steps. The Santa information is stored in a database and managed by an operator of the Web site. As a result, the user can download database information regarding a final reward, a selected character and a character file at the next step from the Web server.

Subsequently, the user selects a desired Santa character and sets up user environments at step S10. This step is performed for the purpose of arousing a user's interest in the Santa program and inducing the user to participate in the Santa program. If the user selects a desired Santa character, the Web server updates the contents in a reward database, which include a reward provision rule, a reward automatically provided according to the rule and a reward calculation algorithm.

The user environments include, in terms of time, a user definition time until a Web page from the Web server arrives at a client and, in terms of software, object-oriented programming (OOP), HTML, CGI and JAVA script. The OOP functions to program on an object basis, wherein the object is a modular unit of the new concept containing both a data value and a procedure associated therewith. The HTML (HyperText Markup Language) is a language used to draw up a Web page for expression of information in WWW. The CGI (Computer-Generated Imagery) is a computer-synthesis technology capable of expressing even a finely detailed image, which cannot be realized by a manual process in consideration of cost and time. The JAVA script is a script language used to describe a procedure to be executed by software on a communication network.

Thereafter, if the user runs the JAVA applet using his computer, the Santa character agent surfs on the Web site at step S12. In other words, the JAVA

applet is run to display the selected Santa character and allow the Santa character agent to surf on the Web site at an interval of predetermined time according to information stored in the Santa database.

When the user clicks on a link area on the Web site at step S13 while
5 surfing on the Web site at step S11, the JAVA applet performs a time checking operation.

Noticeably, if the user clicks on the link area on the Web site, a Web page from the Web server will arrive at a client and, thereafter, the user will meet the Santa character agent within a period of time defined by the operator. In this
10 regard, the Web server determines at step S14 whether the user has met the Santa character agent within the defined period of time.

Upon meeting the user at the above step S14, the Santa character agent congratulates the user on meeting it, provides him with a reward and grows the selected Santa character at step S15. Namely, when an event "HAPPEN TO
15 MEET" occurs, the Santa character agent suddenly appears and shows the user expressions based on audio and video, such as a greeting, movement, gift offering and dancing. For example, upon meeting the user, the Santa character agent may send a congratulatory message to the user while dancing or while waving a flag and greeting the user. At this time, a reward corresponding to each growth step is
20 provided to the user. The selected Santa character is grown according to growth conditions such as the number of times that the user visits a given Web page, a period of time for which the user views the Web page, the number of times that the user clicks on a given advertisement and a purchasing amount of the user.

Thereafter, when the selected Santa character is completed in growth at step
25 S16, the Web server pays the user a reward at step S18. Further, the Web server updates reward information in the member reward database and receives information about another Santa character selected by the user at step S17.

Therefore, the present invention has achieved the developments of

character orientation, JAVA/XML programming, agent, growth simulation, animation and application technologies.

INDUSTRIAL APPLICABILITY

As apparent from the above description, according to the present
5 invention, a Santa character agent is embodied on the Web on the basis of a
JAVA/XML technology, thereby allowing Internet business professional enterprises
to provide rewards to Internet users in a more scientific and measurable manner.
Therefore, the Internet business professional enterprises can secure assets from
customers and cultivate excellent customers, resulting in the activation of an Internet
10 business market.

Further, because the present invention provides a solution to requirements
of a large number of Internet business professional enterprises, it is very useful to
the Internet business field.

Although the preferred embodiments of the present invention have been
15 disclosed for illustrative purposes, those skilled in the art will appreciate that
various modifications, additions and substitutions are possible, without departing
from the scope and spirit of the invention as disclosed in the accompanying claims.

CLAIMS:

1. A method for embodying a Santa character agent on the Web on the basis of a JAVA/XML technology, comprising the steps of:

- a) registering an Internet user as a member in a Web site;
- 5 b) downloading a JAVA applet from a Web server managing said Web site;
- c) downloading URL information, Santa information and reward information from said Web server;
- d) selecting a desired Santa character and setting up user environments;
- 10 e) running said JAVA applet and allowing said Santa character agent to surf on said Web site;
- f) clicking on a link area on said Web site while surfing on said Web site;
- g) meeting said Santa character agent;
- h) congratulating the user on meeting said Santa character agent, providing
- 15 him with a reward and growing the selected Santa character; and
- i) paying said reward to the user if said Santa character is completed in growth.

2. The method as set forth in Claim 1, wherein said step b) includes the step of, if said JAVA applet has been installed in a user's computer, automatically

20 running or sleeping it upon being connected to said Web site and, if said JAVA applet installed in the user's computer is different in version from that provided from said Web server, automatically configuring and displaying an associated menu on a Web page.

3. The method as set forth in Claim 1, wherein said step c) includes the

25 step of managing said URL information in the form of a file, automatically installing

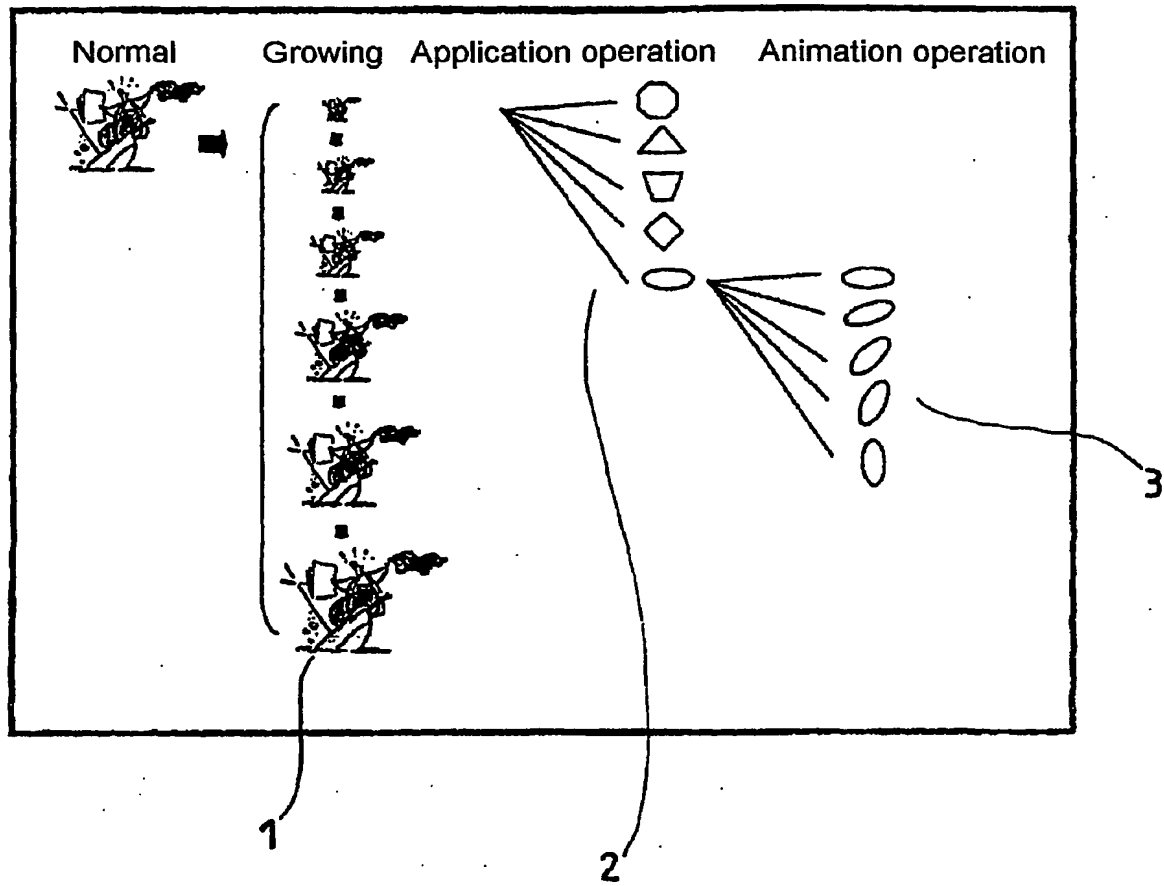
the URL file in a user's computer if it is different from that in the user's computer and downloading database information from said Web server, said database information containing an operation algorithm, a reward provision rule, a reward automatically provided according to the rule, a reward calculation algorithm, a final
5 reward and a character file.

4. The method as set forth in Claim 1, wherein said user environments at said step d) include a character creation algorithm, a character growth algorithm, a character growth simulation algorithm, timing information, an end-of-page transmission time and an interval of time at which said Santa character agent surfs
10 on said Web site according to information in a Santa database.

5. The method as set forth in Claim 1, wherein said step g) includes the step of determining whether the user has met said Santa character agent within a predetermined period of time after receiving a Web page from said Web server.

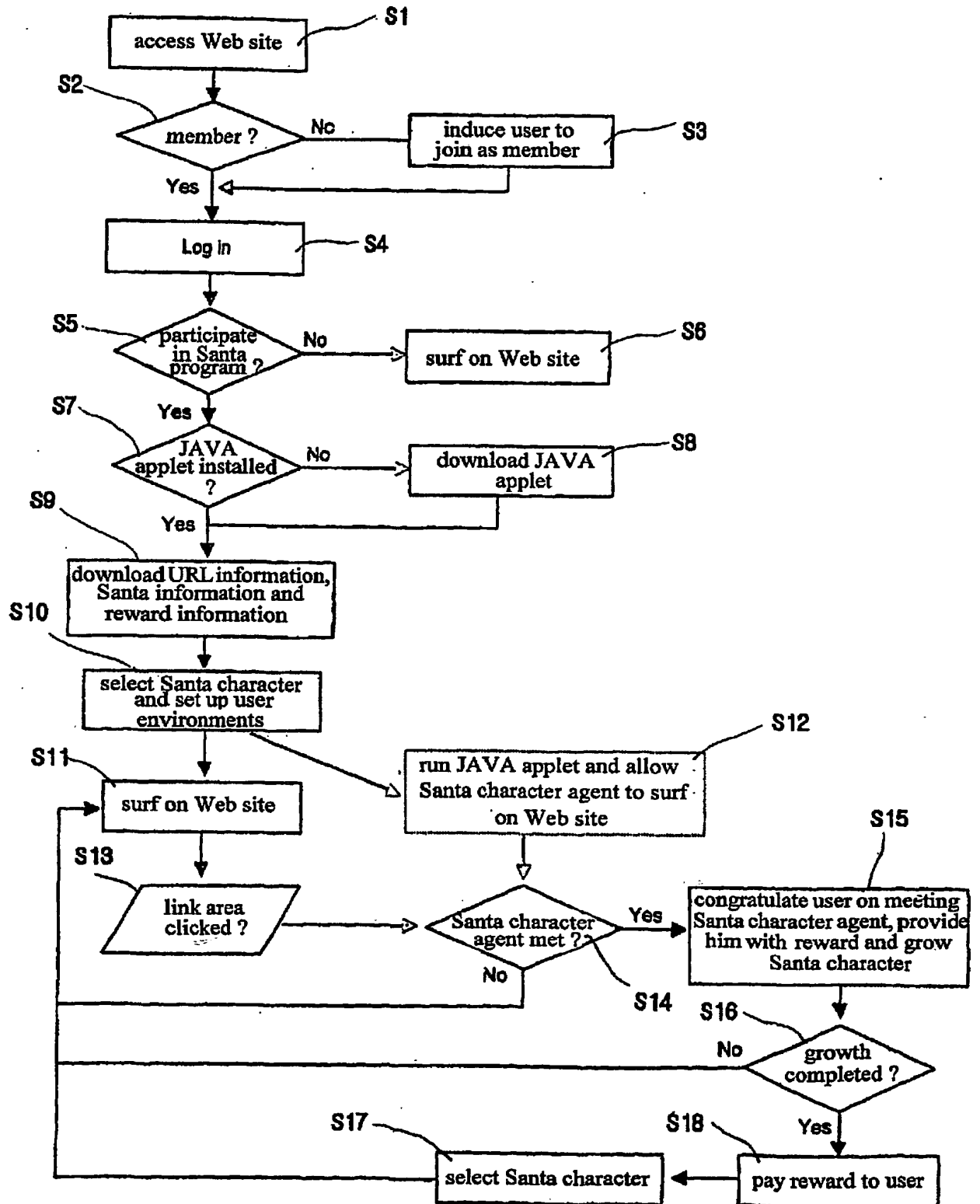
6. The method as set forth in Claim 1, wherein said step h) includes the
15 step of sending a congratulatory message based on audio and moving video to the user upon meeting said Santa character agent, providing said reward to the user according to a measurable and scientific algorithm between a user's action and said reward based on said JAVA/XML technology and growing said selected Santa character according to growth conditions including the number of times that the user
20 visits a given Web page, a period of time for which the user views the Web page, the number of times that the user clicks on a given advertisement and a purchasing amount of the user.

Fig. 2



3/3

Fig. 3



INTERNATIONAL SEARCH REPORT

International application No.
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CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 17/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 G06F17/60, IPC7 G06F17/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP11-192384 A (BANDAI CO.) 21 JULY 1999 ABSTRACT	1-6
A	WO9814886 A (SANDCASTLE INC.) 9 APRIL 1998 ABSTRACT	1-6
A	JP97-96413 A (BANDAI CO.) 31 MARCH 1997 ABSTRACT	1-6

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

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